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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,474	07/11/2003	Nobukazu Kurauchi	72478-9500	5306

21611 7590 02/19/2009

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EXAMINER	
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ART UNIT	**PAPER NUMBER**
2423	
MAIL DATE	**DELIVERY MODE**
02/19/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/618,474	KURAUCHI, NOBUKAZU	
	Examiner	Art Unit	
	JAMES LEIJA	2423	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9-11 and 13-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9-11 and 13-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/18/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 8, 12 have been canceled as per amendment filed on 12/02/2008.

Response to Arguments

Applicant's arguments with respect to claims 1-7, 9-11 and 13-20 have been considered but are moot in view of the new ground(s) of rejection.

Applicant amended independent claims 1, 2, 10, 11 and 13-17 which results in different scope than that of the originally presented claims 1-7, 9-11 and 13-20, as such, applicant's arguments with respect to claims 1-7, 9-11 and 13-20 have been considered but are moot in view of the new ground(s) of rejection.

The applicant has presented arguments directed to the new limitations ammended into the independent claims; the examiner is now relying the subject material related to Sugimoto. By the examiner changing the grounds (to rely on Sugimoto), the applicant's arguments (directed to Satoda and Muller) are moot.

Applicant's arguments filed 12/02/2008 have been fully considered but they are not persuasive. Applicant alleges that the hypothetical combination of Satoda and Muller would render Satoda inoperable since the intraframe of Muller is only transmitted during a fast-forwards or a fast-backwards request. While Satoda discloses a changing channels which is not a fast-forwards or a fast-backwards request.

Examiner respectfully disagrees. As fast-forward or fast-backwards requests and changing channels are analogous video requests that require frame selection in the headend. As can be seen in fig 1 element 31 on page 6 [0108] of Satoda and column 4 lines 11-17 of Muller.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 10, 15 and 17 are rejected under 35 U.S.C. 103(a) as being Satoda (U.S Patent Application Publication 2002/0147980) in view of Sugimoto et al. (USPN 5650829).

As per claim 10 Satoda teaches:

a video data transmission apparatus (Satoda see Abstract) that transmits video data that has been compressed using motion compensation interframe prediction (Satoda Paragraph [0122] Lines 1-10) to a plurality of reception terminals (Satoda Fig. 1 Elem. 40, with Paragraph [0105] Lines 5-10), comprising:

a first encoding unit (Satoda Fig. 5 Elem. 22) applying intraframe encoding processing to a frame of moving image data, to generate intraframe encoded video data (Satoda Paragraph [0122] Lines 1-7);

Satoda is silent on consisting of a first DCT unit and a first quantization unit

Sugimoto teaches consisting of a first DCT unit and a first quantization unit, (Sugimoto fig 11, 12 and 13 element 52)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first encoding unit of Satoda by consisting of a first DCT unit and a first quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

a second encoding unit (Fig. 5 Elem. 23) applying interframe encoding processing to a frame of moving image data, to generate interframe

Satoda is silent on consisting of a second DCT unit and a second quantization unit

Sugimoto teaches consisting of a second DCT unit and a second quantization unit, (Sugimoto fig 11, 12 and 13 element 50)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second encoding unit of Satoda by consisting of a second DCT unit and a second quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

encoded video data (Paragraph [0122] Lines 1-10);

a video data generation unit (Fig. 1 Elem. 31) generating the video data from the intraframe encoded video data and the interframe encoded video data (Paragraph [0123] Lines 1-8); and

a transmission unit (Fig. 1 Elem. 32) operable to transmit the video data to the plurality of reception apparatuses (Paragraph [0108] Lines 4-9),

wherein when the transmission unit is to resume transmission of the video data to one of the reception terminals after temporarily interrupting transmission of the video data to the reception terminal (as during channel changes, see Paragraph [0114] Lines 1-7), the transmission unit transmits at least one frame's worth of the intraframe encoded video data (Paragraph [0123] Lines 1-8) to the reception terminal as substitute I frame data before resuming transmission of the video data (Paragraph [0133] Lines 1-7)

Satoda is silent on wherein the first encoding step and the second encoding step are executed in a same encoder which has one motion compensation unit and one predictive memory unit.

Sugimoto teaches wherein the first encoding step and the second encoding step are executed in a same encoder (Sugimoto fig 11 illustrates elements 46 and 44) which has one motion compensation unit and one predictive memory unit. (Sugimoto fig 11 elements 28, 30, 40 and 10, 12)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Satoda by wherein the first encoding step and the second encoding step are executed in a same encoder which has one motion compensation unit and one predictive memory unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

As per claim 15 Satoda teaches:

an encoder (Satoda Fig. 1 Elem. 10) that compresses moving image data using motion compensation interframe prediction (Satoda Fig. 1 Elem. 20, with Paragraph [0122] Lines 6-10, note Paragraph [0121]), comprising:

a first encoding unit (Satoda Fig. 5 Elem. 22) applying intraframe encoding processing to a frame of moving image data, to generate intraframe encoded video data (Satoda Paragraph [0122] Lines 1-6);

Satoda is silent on consisting of a first DCT unit and a first quantization unit

Sugimoto teaches consisting of a first DCT unit and a first quantization unit, (Sugimoto fig 11, 12 and 13 element 52)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first encoding unit of Satoda by consisting of a first DCT unit and a first quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

a second encoding unit(Satoda Fig. 5 Elem. 23) applying interframe encoding processing to a frame of moving image data, to generate interframe encoded video data (Satoda Paragraph [0122] Lines 6-10);

Satoda is silent on consisting of a second DCT unit and a second quantization unit

Sugimoto teaches consisting of a second DCT unit and a second quantization unit, (Sugimoto fig 11, 12 and 13 element 50)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second encoding unit of Satoda by consisting of a second DCT unit and a second quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

an encoded video data generation unit (Satoda Fig. 1 Elem. 30) generating encoded video data from the intraframe encoded video data and the interframe encoded video data (Satoda Paragraph [0132] Lines 1-7 and Paragraph [0133] Lines 1-7); and

a substitute data generation unit (Satoda Fig. 1 Elem. 31) generating substitute I frame data from the intraframe encoded video data (Satoda Paragraph [0132] Lines 1-4 and Paragraph [0133] Lines 1-7).

Satoda is silent on only one motion compensation unit connected to the first DCT unit and the second DCT unit; and

Only one predictive memory unit connected to the motion compensation unit.

Sugimoto teaches only one motion compensation unit connected to the first DCT unit and the second DCT unit; and (Sugimoto fig 11 illustrates elements 28, 30 and 40 connected to elements 62 and 54)

only one predictive memory unit connected to the motion compensation unit. (Sugimoto fig 11 illustrates elements 10, 12 connected to elements 28, 30, 40)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Satoda by only one motion compensation unit connected to the first DCT unit and the second DCT unit; and only one predictive memory unit connected to the motion compensation unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

As per claim 17 Satoda teaches:

A computer readable medium embodying a program executable in a computer, (see Paragraph [0154]) the program causing the computer to perform a video data transmission method (see abstract) used by a transmission-side apparatus (Fig. 1 Elem. 10) in a video data transmission/reception system (Fig. 1) in which the transmission-side apparatus that transmits video data that has been compressed using motion compensation interframe prediction (Paragraph [0122] Lines 1-10), and a plurality of reception terminals receive the video data (Paragraph [0105] Lines 5-10, and Paragraph [0123] Lines 1-8) and decode the received video data (Paragraph [0133] Lines 1-7), the method comprising:

a first encoding step (Paragraph [0122] Lines 6-10) of applying interframe encoding processing to a plurality of frames of moving image data, to generate the video data (Paragraph [0122] Lines 6-10 and Paragraph [0129] Lines 1-5);

a second encoding step (Paragraph [0122] Lines 1-4) of applying, in parallel with the first encoding step (note in Fig. 5 that Elements 22 and 23 are in parallel), intraframe encoding processing to each of a plurality of frames of the moving image data, to generate substitute I frame data (Paragraph [0122] Lines 1-4, and paragraph [0132] Lines 1-4);

a combining step of combining I frame data and interframe frame data to generate the video data; (Satoda Fig 1 element 31, [0131]-[0132])

a video data transmission step of transmitting the video data to a reception-side apparatus (Fig. 1 Elem. 32 with Paragraph [0108] Lines 4-9);

a transmission interruption step of interrupting transmission of the video data to the reception-side apparatus (Paragraph [0114] Lines 1-6, note a channel change involves breaking

communication with a current encoding unit {Elem. 22} in order to connect with different encoding unit {Elem. 22}, see Paragraphs [0130-0131]);

a substitute data transmission step of transmitting at least one frame's worth of the substitute I frame data to the reception terminal (Paragraph [0132] Lines 1-5); and

a video data retransmission step of resuming transmission of the video data to the reception terminal (Paragraphs [0137-0138]).

Satoda is silent on wherein the first encoding step and the second encoding step are executed in a single encoder, the single encoder containing one motion compensation unit, one predictive memory unit, and two encoding units, each of the two encoding units consisting of a DCT unit and a quantization unit.

Sugimoto teaches wherein the first encoding step and the second encoding step are executed in a single encoder, (Sugimoto fig 11 illustrates elements 46 and 44)

the single encoder containing one motion compensation unit, one predictive memory unit, (Sugimoto fig 11 elements 10, 12 and 28, 30, 40 column 9 lines 14-19, 60-67)and two encoding units, each of the two encoding units consisting of a DCT unit and a quantization unit. (Sugimoto fig 11 elements 52, 62, 64 and 50, 54, 56)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Satoda by wherein the first encoding step and the second encoding step are executed in a single encoder, the single encoder containing one motion

compensation unit, one predictive memory unit, and two encoding units, each of the two encoding units consisting of a DCT unit and a quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

Claims 1, 11, 13, 14 and 16 are rejected under 35 U.S.C. 103(a) as being Satoda (U.S Patent Application Publication 2002/0147980) in view of Muller (USPN 6,031,574) and Sugimoto et al. (USPN 5650829).

As per claim 1 Satoda teaches:

a video data transmission/reception system (Satoda see Abstract) comprising a transmission-side apparatus (Satoda Figure 1 Element 10) and a plurality of reception terminals (Satoda Fig. 1 Elem. 40, with Paragraph [0105] Lines 5-10), the transmission- side apparatus transmitting video data that has been compressed using motion compensation interframe prediction (Satoda Paragraph [0122] Lines 1-10), and the reception terminals receiving the video data and decoding the received video data (Satoda Paragraph [0113]), wherein the transmission-side apparatus includes:

Satoda teaches a first encoding unit (Satoda Fig. 5 Elem. 23), the first encoding unit applying interframe encoding processing to a plurality of frames of moving image data, (Satoda Paragraph [0122] Lines 6-10);

Satoda is silent on consisting of a first DCT unit and a first quantization unit

Sugimoto teaches consisting of a first DCT unit and a first quantization unit, (Sugimoto fig 11, 12 and 13 element 50)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first encoding unit of Satoda by consisting of a first DCT unit and a first quantization unit as taught by Sugimoto in order to compensate for degradation by a

selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

Satoda is silent on a first encoding unit to generate only interframe frame data for the video data.

Muller teaches a first encoding unit to generate only interframe frame data for the video data. (Muller fig 1 and 2 element K1 column 5 lines 16-25)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first encoding unit of Satoda by generating only interframe data as taught by Muller in order to provide an uncoupling between the coding of an intraframe encoder and interframe encoder.

a second encoding unit (Satoda Fig. 5 Elem. 22), the second encoding unit applying in parallel with the encoding processing by the first encoding unit (Satoda Fig. 5, note Elements 22 and 23 are in parallel), intraframe encoding processing to a frame of the moving image data, to generate substitute I frame data for the video data (Satoda Paragraph [0122] Lines 1-6, and Paragraph [0133] Lines 1-7);

Satoda is silent on consisting of a second DCT unit and a second quantization unit

Sugimoto teaches consisting of a second DCT unit and a second quantization unit, (Sugimoto fig 11, 12 and 13 element 52)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second encoding unit of Satoda by consisting of a second

DCT unit and a second quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

an encoded video data generation unit (Satoda Fig 1 element 31) connected to the first encoding unit ant the second encoding unit to combine the substitute I frame data and the interframe data to form the video data; and (Satoda Fig 1 element 31 page 7 [0131]-[0132])

a transmission unit transmitting the video data and the substitute I frame data to the plurality of reception terminals (Satoda Fig. 1 Elem. 32 with Paragraph [0108]),

wherein when the transmission unit is to resume transmission of the video data to one of the reception terminals after temporarily interrupting transmission of the video data to the reception terminal (Satoda Paragraph [0157] Lines 1-7, and also Paragraph [0108] Lines 1-9, note a channel change interrupts the video data), the transmission unit transmits at least one frame's worth of the substitute I frame data to the reception terminal (Satoda Paragraph [0108] Lines 4-9) before resuming transmission of the video data (Satoda Paragraph [0123] Lines 18), and

the reception terminal, when the transmission unit is to resume the temporarily interrupted transmission of the video data, receives the transmitted substitute I frame data, decodes the received substitute I frame data (Satoda note Fig. 1 Elem. 42), and uses the decoded substitute I frame data as reference frame data to decode video data that is received after resumption of transmission, (Satoda Paragraph [0133] Lines 1-7)

Satoda is silent on wherein the first encoding unit and the second encoding unit are included in a same encoder which has one motion compensation unit and one predictive memory unit.

Sugimoto teaches and wherein the first encoding unit and the second encoding unit are included in a same encoder (Sugimoto fig 11, 12 and 13 elements 46 and 44)

which has one motion compensation unit and one predictive memory unit. (Sugimoto fig 11, 12 and 13 elements 10, 12 and 28, 30, 40 column 9 lines 14-19, 60-67)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Satoda by wherein the first encoding unit and the second encoding unit are included in a same encoder which has one motion compensation unit and one predictive memory unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

As per claim 11 Satoda teaches:

a video data transmission/reception system (Satoda see Abstract) comprising a plurality of video data provision apparatuses (Satoda Fig. 1 Element 20 with Paragraph [0109] Lines 1-6), a plurality of reception terminals (Satoda Fig. 1 Elem. 40, with Paragraph [0105] Lines 5-10), and a distribution server (Satoda Fig. 1 Elem. 10, note Satoda teaches data provision apparatuses external to the distribution server, see Fig. 7 and Paragraph [0146]), the video data provision apparatuses transmitting video data that has been compressed using motion compensation interframe prediction (Satoda Fig. 5 Elem. 20a with Paragraph [0122] Lines 1-10), each reception terminal receiving the video data from any one of the video data provision apparatuses (Satoda Paragraph [0105] Lines 1-10) and decoding the received video data (Satoda Paragraph [0113] Lines 1-7), and the distribution server conveying the video data between the video data provision apparatuses and the reception terminals (Satoda Paragraph [0104] Lines 1-4),

wherein each video data provision apparatus includes:

Satoda teaches a first encoding unit (Satoda Fig. 5 Elem. 23), the first encoding unit applying interframe encoding processing to each of a plurality of frames of moving image data, (Satoda Paragraph [0122] Lines 6-10)

Satoda is silent on consisting of a first DCT unit and a first quantization unit

Sugimoto teaches consisting of a first DCT unit and a first quantization unit, (Sugimoto fig 11, 12 and 13 element 50)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first encoding unit of Satoda by consisting of a first DCT unit and a first quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

Satoda is silent on a first encoding unit to generate only interframe frame data for the video data.

Muller teaches a first encoding unit to generate only interframe frame data for the video data. (Muller fig 1 and 2 element K1 column 5 lines 16-25)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first encoding unit of Satoda by generating only interframe data as taught by Muller in order to provide an uncoupling between the coding of an intraframe encoder and interframe encoder.

a second encoding unit (Satoda Fig. 5 Elem. 22), the second encoding unit applying in parallel with the encoding processing by the first encoding unit (Satoda note in Fig. 5 that Elements 22 and 23 are in parallel), intraframe encoding processing to each of a plurality of frames of the moving image data, to generate substitute I frame data (Satoda Paragraph [0122] Lines 1-6 and Paragraph [0129] Lines 1-5); and

Satoda is silent on consisting of a second DCT unit and a second quantization unit

Sugimoto teaches consisting of a second DCT unit and a second quantization unit, (Sugimoto fig 11, 12 and 13 element 52)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second encoding unit of Satoda by consisting of a second DCT unit and a second quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

and encoded video data generation unit (Satoda Fig 1 element 31) connected to the first encoding unit ant the second encoding unit to combine the substitute I frame data and the interframe data to form the video data; and (Satoda Fig 1 element 31 [0131]-[0132])

Satoda is silent on wherein the first encoding unit and the second encoding unit are included in a same encoder which has one motion compensation unit and one predictive memory unit

Sugimoto teaches and wherein the first encoding unit and the second encoding unit are included in a same encoder (Sugimoto fig 11 elements 46,52 and 50) which has one motion compensation unit and one predictive memory unit. (Sugimoto fig 11 elements 10, 12 and 28, 30, 40 column 9 lines 14-19, 60-67)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Satoda by wherein the first encoding unit and the second encoding unit are included in a same encoder which has one motion compensation unit and one predictive memory unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

the distribution server includes:

a switch request reception unit (Satoda Fig. 1 Elem. 30) operable to receive a request from one of the reception terminals to switch video data received by the reception terminal to different video data (Satoda Paragraph [0108] Lines 1-9); and

a switch transmission unit (Satoda Fig. 1 Elem. 31) stopping transmission of the video data being transmitted to the request-originating user terminal (Satoda Paragraph [0123] Lines 1-4, note switching to a different video source includes breaking off from the previous source), obtaining substitute I frame data from a video data provision apparatus that is to provide the different video data (Satoda Paragraph [0132] Lines 1-3), transmitting the obtained substitute I frame data to the user terminal (Satoda Paragraph [0132] Lines 2-4), and transmitting the different video data to the user terminal (Satoda Paragraph [0132] Lines 4-7), when the switch request reception unit receives the request from one of the reception terminals. (Satoda Paragraph [0123] Lines 1-4)

As per claim 13 Satoda teaches:

a video data provision apparatus (Satoda Fig. 1 Elem. 10) in a video data transmission/reception system (Satoda see Abstract) that includes a plurality of video data provision apparatuses (Satoda Fig. 1 Elem. 20 with Paragraph [0109] Lines 1-6), a plurality of reception terminals (Satoda Fig. 1 Elem. 40, with Paragraph [0105] Lines 5- 10), and a distribution server (Satoda Fig. 1 Elem. 30), the video data provision apparatuses transmitting video data that has been compressed using motion compensation interframe prediction (Satoda Paragraph [0122] Lines 1-10), each . reception terminal receiving video data from any one of the video data provision apparatuses (Satoda Paragraph [0105] Lines 1-10 and Paragraph [0108] Lines 1-9), and the distribution server conveying the video data between the video data provision apparatuses and the reception terminals (Satoda Paragraph [0108] Lines 5-9), the video data provision apparatus comprising:

Satoda teaches a first encoding unit (Satoda Fig. 5 Elem. 23), the first encoding unit applying interframe encoding processing to each of a plurality of frames of moving image data, (Satoda Paragraph [0122] Lines 6-10)

Satoda is silent on consisting of a first DCT unit and a first quantization unit

Sugimoto teaches consisting of a first DCT unit and a first quantization unit, (Sugimoto fig 11, 12 and 13 element 50)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first encoding unit of Satoda by consisting of a first DCT unit and a first quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

Satoda is silent on a first encoding unit to generate only interframe frame data for the video data.

Muller teaches a first encoding unit to generate only interframe frame data for the video data. (Muller fig 1 and 2 element K1 column 5 lines 16-25)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first encoding unit of Satoda by generating only interframe data as taught by Muller in order to provide an uncoupling between the coding of an intraframe encoder and interframe encoder.

a second encoding unit, (Satoda Fig. 5 Elem. 22), the second encoding unit applying in parallel with the encoding processing by the first encoding unit (Satoda note in Fig. 5 that Elements 22 and 23 are in parallel), intraframe encoding processing to each of a plurality of frames of the moving image data, to generate substitute I frame data (Satoda Paragraph [0122] Lines 1-6, and Paragraphs [0132-0133]),

Satoda is silent on consisting of a second DCT unit and a second quantization unit

Sugimoto teaches consisting of a second DCT unit and a second quantization unit, (Sugimoto fig 11, 12 and 13 element 52)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second encoding unit of Satoda by consisting of a second DCT unit and a second quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

and encoded video data generation unit (Satoda Fig 1 element 31) connected to the first encoding unit ant the second encoding unit to combine the substitute I frame data and the interframe data to form the video data; and (Satoda Fig 1 element 31 [0131]-[0132])

a transmission unit (Satoda Fig. 1 Elem. 31) transmitting the video data to the distribution server (Satoda Paragraph [0108] Lines 4-9), and, when one of the reception terminals requests to switch video data being received to the video data being transmitted by the transmission unit (Satoda Paragraph [0108] Lines 1-9), transmit at least one frame of substitute I frame data to the reception terminal via the distribution server (Satoda Paragraph [0108] Lines 4-9), before the switch (Satoda Paragraph [0123] Lines 1-8 and Paragraph [0132] Lines 1-7, note an initial I-frame is transmitted prior to switching to the interframe encoding of Fig. 5 Element 23).

Satoda is silent on wherein the first encoding unit and the second encoding unit are included in a same encoder which has one motion compensation unit and one predictive memory unit.

Sugimoto teaches and wherein the first encoding unit and the second encoding unit are included in a same encoder (Sugimoto fig 11 elements 46, 50 and 52) which has one motion compensation unit and one predictive memory unit. (Sugimoto fig 11 elements 10, 12 and 28, 30, 40 column 9 lines 14-19, 60-67)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Satoda by wherein the first encoding unit and the second encoding unit are included in a same encoder which has one motion compensation unit and one predictive memory unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

As per claim 14 Satoda teaches:

an encoder (Satoda Fig. 5) that compresses moving image data using motion compensation interframe prediction (Satoda Paragraph [0122] Lines 6-10), comprising:

Satoda teaches a first encoding unit (Satoda Fig. 5 Elem. 23), the first encoding unit applying interframe encoding processing to each of a plurality of frames of moving image data, (Satoda Paragraph [0122] Lines 6-10)

Satoda is silent on consisting of a first DCT unit and a first quantization unit

Sugimoto teaches consisting of a first DCT unit and a first quantization unit, (Sugimoto fig 11, 12 and 13 element 52)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first encoding unit of Satoda by consisting of a first DCT unit and a first quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

Satoda is silent on a first encoding unit to generate only interframe frame data for the video data.

Muller teaches a first encoding unit to generate only interframe frame data for the video data. (Muller fig 1 and 2 element K1 column 5 lines 16-25)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first encoding unit of Satoda by generating only interframe data as taught by Muller in order to provide an uncoupling between the coding of an intraframe encoder and interframe encoder.

a second encoding unit, (Satoda Fig. 5 Elem. 22), the second encoding unit applying in parallel with the encoding processing by the first encoding unit (Satoda note in Fig. 5 that Elements 22 and 23 are in parallel), intraframe encoding processing to each of a plurality of frames of the moving image data, to generate substitute I frame data (Satoda Paragraph [0129] Lines 1-5, and paragraphs [0132-0133]); and

Satoda is silent on consisting of a second DCT unit and a second quantization unit

Sugimoto teaches consisting of a second DCT unit and a second quantization unit, (Sugimoto fig 11, 12 and 13 element 50)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second encoding unit of Satoda by consisting of a second DCT unit and a second quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality

and encoded video data generation unit (Satoda Fig 1 element 31) connected to the first encoding unit ant the second encoding unit to combine the substitute I frame data and the interframe data to form the video data; and (Satoda Fig 1 element 31 [0131]-[0132])

Satoda is silent on only one motion compensation unit connected to the first DCT unit and the second DCT unit; and only one predictive memory unit connected to the motion compensation unit.

Sugimoto teaches only one motion compensation unit connected to the first DCT unit and the second DCT unit; and (Sugimoto fig 11 illustrates elements 28, 30 and 40 connected to elements 62 and 54)

only one predictive memory unit connected to the motion compensation unit. (Sugimoto fig 11 illustrates elements 10, 12 connected to elements 28, 30, 40)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Satoda by only one motion compensation unit connected to the first DCT unit and the second DCT unit; and only one predictive memory unit connected to the motion compensation unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

As per claim 16 Satoda teaches:

a video data transmission/reception method (Satoda see Abstract) used by a transmission-side apparatus (Satoda Fig. 1 Elem. 10) and one of a plurality of reception terminals (Satoda Fig. 1 Elem. 40, with Paragraph [0105] Lines 5-10) in a video data transmission/reception system (Satoda Fig. 1) in which the transmission-side apparatus that transmits video data that has been compressed using motion compensation interframe prediction (Satoda Paragraph [0122] Lines 1-10), and the plurality of reception terminals receive the video data (Satoda Paragraph [0123] Lines 1-8) and decode the received video data (Satoda Paragraph [0133] Lines 1-7), the method comprising:

a first encoding step (Satoda Paragraph [0122]), in the transmission-side apparatus (Satoda note the configuration of Fig. 1 Elements 10 and 20), of applying interframe encoding processing to a plurality of frames of moving image data,

Satoda is silent on the first encoding step to generate only interframe frame data for the video data.

Muller teaches a first encoding step to generate only interframe frame data for the video data. (Muller fig 1 and 2 element K1 column 5 lines 16-25)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first encoding step of Satoda by generating only interframe data as taught by Muller in order to provide an uncoupling between the coding of an intraframe encoder and interframe encoder.

a second encoding step (Satoda Paragraph [0122] Lines 1-4), in the transmission- side apparatus (Satoda note the configuration of Fig. 1 Elements 10 and 20), of applying, in parallel with the first encoding step (Satoda note in Fig. 5 that Elements 22 and 23 are in parallel), intraframe encoding processing to each of a plurality of frames of the moving image data, to generate substitute I frame data (Satoda Paragraph [0122] Lines 1-4, and paragraph [0132] Lines 1-4);

a combining step of combining I frame data and interframe frame data to generate the video data; (Satoda Fig 1 element 31, [0131]-[0132])

a video data transmission step, in the transmission-side apparatus, of transmitting the video data to a reception-side apparatus (Satoda Fig. 1 Elem. 32 with Paragraph [0108] Lines 4-9);

a transmission interruption step, in the transmission-side apparatus, of interrupting transmission of the video data to the reception-side apparatus (Satoda Paragraph [0114] Lines 1-6, note a channel change involves breaking communication with a current encoding unit {Elem. 22} in order to connect with different encoding unit {Elem. 22}, see Paragraphs [0130-0131]);

a substitute data transmission step, in the transmission-side apparatus, of transmitting at least one frame's worth of the substitute I frame data to the reception terminal (Satoda Paragraph [0132] Lines 1-5);

a substitute data decoding step, in the reception terminal, of decoding the substitute I frame data (Satoda Paragraph [0133] Lines 1-7);

a video data retransmission step, in the transmission side apparatus, of resuming transmission of the video data to the reception terminal (Satoda Paragraphs [0137-0138]); and

a video data decoding step, in the reception terminal, of decoding the video data received after resumption of transmission, using data obtained as a result of executing the substitute data decoding step, as reference frame data (Satoda Paragraph [0139] Lines 1-9)

Satoda is silent on wherein the first encoding step and the second encoding step are executed in a single encoder, the single encoder containing one motion compensation unit, one predictive memory unit, and two encoding units, each of the two encoding units consisting of a DCT unit and a quantization unit.

Sugimoto teaches wherein the first encoding step and the second encoding step are executed in a single encoder (Sugimoto fig 11 illustrates elements 46, 44, 50, and 52) the single encoder containing one motion compensation unit, one predictive memory unit, (Sugimoto fig 11 elements 10, 12 and 28, 30, 40 column 9 lines 14-19, 60-67) and two encoding units, each of the two encoding units consisting of a DCT unit and a quantization unit. (Sugimoto fig 11 elements 52, 62, 64 and 50, 54, 56)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Satoda by wherein the first encoding step and the second encoding step are executed in a single encoder, the single encoder containing one motion compensation unit, one predictive memory unit, and two encoding units, each of the two encoding units consisting of a DCT unit and a quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

Claims 2-7, 9 and 19 are rejected under 35 U.S.C. 103(a) as being Kunkel et al. (USPN 7,100,183) in view of Satoda (U.S Patent Application Publication 2002/0147980) and Muller (USPN 6,031,5740) and Sugimoto et al. (USPN 5650829).

As per claim 2 Kunkel teaches:

a video data transmission apparatus (Kunkel Fig. 1 with Col. 3 Lines 4-9) that transmits video data that has been compressed using motion compensation interframe prediction (Kunkel Col. 3 Lines 31-35) to a plurality of reception terminals (Kunkel Fig. 1 Elements 16, 27 and 29, with Col. 3 Lines 50-57), comprising:

a transmission unit transmitting the video data and the substitute I frame data to the plurality of reception terminals (Kunkel Fig. 1 Elements 12 with Col. 4 Lines 26-33, with Col. 7 Lines 14-17),

and when the transmission unit is to resume transmission of the video data to one of the reception terminals after temporarily interrupting transmission of the video data to the reception terminal (Kunkel Col. 7 Lines 10-14),

the transmission unit transmits at least one frame's worth of the substitute I frame data to the reception terminal before resuming transmission of the video data (Kunkel Col. 7 Lines 8-17, note I frames are provided during the transition from a targeted advertisement to the original programming),

Kunkel further teaches:

the transmission side apparatus receives source video programming that is either in an analog or digital format (Kunkel Col. 3 Lines 31-35)

Kunkel is silent on:

a first encoding unit consisting of a first DCT unit a first quantization unit, the first encoding unit applying interframe encoding processing to each of a plurality of frames of moving image data, to generate only interframe frame data for the video data;

a second encoding unit consisting of a second DCT uniat and a second quantization unit, the second encoding unit applying in parallel with the encoding processing by the first encoding unit, intraframe encoding processing to a frame of the moving image data, to generate substitute I frame data for the video data;

and encoded video data generation unit connected to the first encoding unit ant the second encoding unit to combine the substitute I frame data and the interframe data to form the video data; and

wherein the first encoding unit and the second encoding unit are included in a same encoder which has one motion compensation unit and one predictive memory unit.

Satoda teaches:

a first encoding unit (Satoda Fig. 5 Elem. 23), the first encoding unit applying interframe encoding processing to each of a plurality of frames of moving image data, (Satoda Paragraph [0122] Lines 6-10);

Satoda is silent on consisting of a first DCT unit and a first quantization unit

Sugimoto teaches consisting of a first DCT unit and a first quantization unit, (Sugimoto fig 11 elements 50, 54, 56)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first encoding unit of Satoda by consisting of a first DCT unit and a first quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

Satoda is silent on a first encoding unit to generate only interframe frame data for the video data.

Muller teaches a first encoding unit to generate only interframe frame data for the video data. (Muller fig 1 and 2 element K1 column 5 lines 16-25)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first encoding unit of Satoda by generating only interframe data as taught by Muller in order to provide an uncoupling between the coding of an intraframe encoder and interframe encoder.

a second encoding unit (Satoda Fig. 5 Elem. 22), the second encoding unit applying in parallel with the encoding processing by the first encoding unit (Satoda Fig. 5, note Elements 22 and 23 are in parallel), intraframe encoding processing to a frame of the moving image data, to generate substitute I frame data for the video data (Satoda Paragraph [0122] Lines 1-6, and Paragraph [0133] Lines 1-7).

Satoda is silent on consisting of a second DCT unit and a second quantization unit

Sugimoto teaches consisting of a second DCT unit and a second quantization unit, (Sugimoto fig 11 element 52)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second encoding unit of Satoda by consisting of a second DCT unit and a second quantization unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the video transmission device of Kunkel by a first encoding unit consisting of a first DCT unit a first quantization unit, the first encoding unit applying interframe encoding processing to each of a plurality of frames of moving image data, to generate only interframe frame data for the video data; a second encoding unit consisting of a second DCT uniat and a second quantization unit, the second encoding unit applying in parallel with the encoding processing by the first encoding unit, intraframe encoding processing to a frame of the

moving image data, to generate substitute I frame data for the video data; as taught by Satoda, Muller and Sugimoto in order to provide a smooth transition between broadcast and targeted video streams.

and encoded video data generation unit (Satoda Fig 1 element 31) connected to the first encoding unit ant the second encoding unit to combine the substitute I frame data and the interframe data to form the video data; and (Satoda Fig 1 element 31 [0131]-[0132])

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the video transmission device of Kunkel an encoded video data generation unit to connect the first and second encoding units as taught by Satoda in order to provide a synchronization between the outputs of the first and second encoder.

Satoda is silent on wherein the first encoding unit and the second encoding unit are included in a same encoder which has one motion compensation unit and one predictive memory unit.

Sugimoto teaches and wherein the first encoding unit and the second encoding unit are included in a same encoder (Sugimoto fig 11, 12 and 13 elements 46 and 44)

which has one motion compensation unit and one predictive memory unit. (Sugimoto fig 11, 12 and 13 elements 10, 12 and 28, 30, 40 column 9 lines 14-19, 60-67)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Kunkel and Satoda by wherein the first encoding unit and the second encoding unit are included in a same encoder which has one motion

compensation unit and one predictive memory unit as taught by Sugimoto in order to compensate for degradation by a selection in the coding that provides a higher compression efficiency, thus providing a higher picture quality.

As per Claim 3 Kunkel in view of Satoda and Muller and Sugimoto teach the video data transmission apparatus of Claim 2, further comprising:

an option data transmission unit transmitting option video data to the reception terminal (Kunkel Fig. 1 Elements 12 and 46; with Col. 4 Lines 65-67 through Col. 5 Lines 1-6, and Col. 5 Lines 40-48), in parallel with the transmission of the video data (Kunkel Fig. 1 Elements 14, 18, 42 and 16; with Col. 3 Lines 7-11, note the multiple parallel downstream channels dedicated to a single set top box),

wherein the interruption of video data transmission to the reception terminal is caused by the transmission of the option video data (Kunkel Col. 6 Lines 16- 22, and Col. 7 Lines 10-17).

As per claim 4 Kunkel in view of Satoda and Muller and Sugimoto teach the video data transmission apparatus of Claim 3, wherein the option data transmission unit includes:

an information collection sub-unit (Kunkel Fig. 1 Elements 16, 19 and 20) collecting , from each of one or more of the reception terminals, information about preferences of a user of the reception terminal (Kunkel Col. 3 Lines 21-28 with Col. 4 Lines 13-20), and

based on the collected information, selects contents of option data to be transmitted (Kunkel Col. 4 Lines 47-50 and Col. 5 Lines 58-61).

As per claim 5 Kunkel in view of Satoda and Muller and Sugimoto teach the video data transmission apparatus of Claim 3, wherein the transmission unit includes:

a broadcast transmission sub-unit broadcasting a same data to a plurality of transmission destinations (Kunkel Fig. 2A Elem. 48 with Col. 5 Lines 54-67 through Col. 6 Lines 1-8); and

an individual transmission sub-unit transmitting individual data to an individual transmission destination (Kunkel Fig. 2A Elem. 50 with Col. 5 Lines 54-61), and

wherein the broadcast transmission sub-unit transmits the video data (Kunkel Col. 5 Lines 40-44 and 61-65), and the individual transmission sub-unit transmits the substitute I frame data (Kunkel Col. 7 Lines 10-17, note Kunkel teaches that I frames must be sent at the beginning of a target ad, and Satoda teaches that the second encoding unit provides dedicated I frames), and

the option data transmission unit transmits the option video data in an individual transmission manner (Kunkel Col. 5 Lines 54-65).

As per Claim 6 Kunkel in view of Satoda and Muller and Sugimoto teach the video data transmission apparatus of Claim 5, wherein the transmission unit includes

a switch sub-unit (Kunkel Fig. 2A Elem. 52) exempting a reception terminal to which substitute I frame data or option video data is being transmitted from being a target of transmission of the video data by the broadcast transmission sub-unit (Kunkel Col. 6 Lines 9-26, note the PID information is used to exempt a targeted ad recipient from receiving the default ad).

As per Claim 7 Kunkel in view of Satoda and Muller and Sugimoto teach the video data transmission apparatus of Claim 3, wherein the option data transmission unit includes

an insertion sub-unit transmitting secondary option data part way through transmission of the option data (Kunkel: Fig. 1 Elem. 40; with Col. 4 Lines 33-39, 47-50 and 65-67, and Col.5 Lines 1-6); and

a third encoding sub-unit (Satoda: Fig. 4 Elements10a and 20a-20a illustrates the use of multiple "contents input unit", each "contents input unit" has multiple encoders) generating option data substitute I frame data that corresponds to at least one frame of the option data starting from a frame that is a first frame after transmission resumption, after transmission of the secondary option data ends and before transmission of the option data resumes, (Kunkel: Col. 7 Lines 14-17, note Kunkel teaches that I frames are needed when acquiring an original video stream),

wherein when transmission of the option data is to resume after the transmission of the secondary option data ends, the option data transmission unit transmits the option data substitute I frame data to the reception terminal before transmission of the option data resumes (Kunkel: Col. 7 Lines 13-17).

As per Claim 9 Kunkel in view of Satoda and Muller and Sugimoto teach the video data transmission apparatus of Claim 2, wherein

the transmission unit determines how many frames of substitute I frame data to transmit to the reception terminal before resuming transmission of the video data (Satoda Paragraph [0132] Lines 1-7), based on a GOP structure of the video data, and

in particular, based on a frequency of appearance of frames having an I attribute or a P attribute (Satoda Paragraph [0135] Lines 1-7, note Satoda teaches a substitute I frame is

transmitted to a user terminal if the interframe encoder is outputting a P frame; however if the interframe encoder is outputting an I frame the substitute I frame is not needed, and thus is not transmitted).

As per claim 19 Kunkel in view of Satoda and Muller and Sugimoto teach the video data transmission apparatus of Claim 2 further comprising means for storing substitute I frame data from the second encoding unit for transmission to the transmission unit. (Muller Fig 2 and 3, element “memory {MEMO}”, column 1 lines 55-58)

Claim 18 is rejected under 35 U.S.C. 103(a) as being Satoda (U.S Patent Application Publication 2002/0147980) in view of Muller USPN 6,031,574 and Kunkel et al. (USPN 7,100,183) and Sugimoto et al. (USPN 5650829).

As per claim 18 Satoda in view of Muller and Sugimoto teach the video data transmission apparatus of Claim 1 further comprising

a substitute I frame buffer (Muller Fig 2 and 3, element "memory{MEMO}")connected to the second encoding unit and the transmission unit to store substitute I frame data, ((Muller Fig 2 and 3, illustrate the memory connected to the intraframe encoder and sending-receiving unit thought the control unit.)

Satoda teaches wherein the transmission unit transmitting video data (Fig. 1 Elem. 32 with Paragraph [0108])

Satoda is silent on transmits at least one frame's worth of the substitute I frame data to the reception terminal before resuming transmission of the video data using substitute I frame data stored in the substitute I frame buffer.

Kunkel teaches transmits at least one frame's worth of the substitute I frame data to the reception terminal before resuming transmission of the video data. (Kunkel, Col. 7 Lines 8-17, I frames are provided during the transition from a targeted advertisement to the original programming),

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the transmission unit of Satoda by transmitting I-frames during the transition as taught by Kunkel in order to quickly reacquire the original channel.

Satoda and Kunkel are silent on using substitute I frame data stored in the substitute I frame buffer.

Muller teaches using substitute I frame data stored in the substitute I frame buffer. (Muller column 4 line 6-17)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the video data of Satoda and Kunkel by using substitute I frame data stored in the substitute I frame buffer as taught by Muller in order to selection of the channel by the user.

Claim 20 is rejected under 35 U.S.C. 103(a) as being Satoda (U.S Patent Application Publication 2002/0147980) in view of Muller (USPN 6,031,574) and Sporer (Pub No.: US 2001/024472) and Sugimoto et al. (USPN 5650829).

As per claim 20 Satoda in view of Muller and Sugimoto teach the video data transmission apparatus of Claim 1 wherein the interframe data comprise P frame data

Satoda and Miller are silent on B frame data.

Sporer teaches interframe data comprise P frame data and B frame data. (Sporer page 1 [0005])

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the interframe data of Satoda and Muller by comprising P and B frame data as taught by Sporer in order compute predictive errors.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Suzuki et al. USPN 6,031,575 fig 14 illustrates two DCT elements 18 and 4, two quantization elements 19 and 5 one Motion Compensation element 12 and one frame memory element 11.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES LEIJA whose telephone number is (571)270-5249. The examiner can normally be reached on M-F 730 am to 5pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ANDREW Y. KOENIG can be reached on (571) 272-7296. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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